

**Amendments to the Claims:**

**Claims 1-12 (Cancelled)**

13. **(New)** A carbonization apparatus for producing activated carbon by subjecting an organic waste material to be treated such as raw garbage, wood debris, meat-and-bone meal, waste clothes and plastic wastage to carbonization treatment including heating, drying, dry distillation and activation processes using steam, which apparatus comprises:

a drying carbonization furnace for drying said waste material by heat transmission caused by bringing said waste material into direct contact with overheated steam introduced thereinto to carbonize said waste material and discharging spent steam which is no longer required,

a high-temperature steam generator for generating, from the steam introduced therein, the overheated steam to be fed to said drying carbonization furnace,

a deodorizing furnace for deodorizing impurities contained in the spent steam discharged from said drying carbonization furnace by heating the steam and discharging the steam reaching a high temperature, and

a waste heat boiler for generating steam from water heated with the high-temperature steam discharged from said deodorizing furnace.

14. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 13, wherein said drying furnace, carbonization furnace, drying carbonization furnace or carbonization accelerating furnace is provided with a cylinder shell having a waste intake port for introducing waste material to be treated, a cylinder part for stirring and moving the waste material, an exhaust port for discharging the waste material, and a steam inlet port for introducing overheated steam or spent steam tangentially from the outside of said cylinder part to the inside of said cylinder part, and rotatable stirring blades for stirring and moving the waste material in said cylinder shell.

15. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 14, wherein said steam inlet port is formed to introduce the overheated steam or spent steam in the same direction tangent to the inner surface of said cylinder as the rotation direction of said stirring blades.

16. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 15, wherein said cylinder shell is provided with a plurality of steam inlet ports.

17. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 16, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

18. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 17, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

19. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 16, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

20. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 15, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent

to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

21. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 20, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

22. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 15, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

23. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 14, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

24. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 23, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

25. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 14, further comprising a pressure regulation means or restriction means for adjusting the

overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

26. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 13, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

27. **(New)** A carbonization apparatus for producing activated carbon by subjecting an organic waste material to be treated such as raw garbage, wood debris, meat-and-bone meal, waste clothes and plastic wastage to carbonization treatment including heating, drying, dry distillation and activation processes using steam, which apparatus comprises:

a carbonization furnace for carbonizing waste material by heat transmission caused by bringing said waste material into direct contact with overheated steam introduced thereinto and discharging spent steam which is no longer required,

a drying carbonization furnace for drying said waste material by heat transmission caused by bringing said waste material into direct contact with the overheated steam introduced thereinto to dry said waste material and discharging spent steam,

a high-temperature steam generator for generating, from the steam introduced therein, the overheated steam to be fed to said carbonization furnace,

a deodorizing furnace for deodorizing impurities contained in the spent steam discharged from said drying furnace by heating the steam and discharging the steam reaching a high temperature, and

a waste heat boiler for generating steam from water heated with the high-temperature steam discharged from said deodorizing furnace.

28. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 27, wherein said drying furnace, carbonization furnace, drying carbonization furnace or carbonization accelerating furnace is provided with a cylinder shell having a waste intake port for introducing waste material to be treated, a cylinder part for stirring and moving the waste material, an exhaust port for discharging the waste material, and a steam inlet port for introducing overheated steam or spent steam tangentially from the outside of said cylinder part to the inside of said cylinder part, and rotatable stirring blades for stirring and moving the waste material in said cylinder shell.

29. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 28, wherein said steam inlet port is formed to introduce the overheated steam or spent steam in the same direction tangent to the inner surface of said cylinder as the rotation direction of said stirring blades.

30. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 29, wherein said cylinder shell is provided with a plurality of steam inlet ports.

31. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 30, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

32. **(New)** The carbonization apparatus for producing activated carbon set forth in 31, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

33. **(New)** The carbonization apparatus for producing activated carbon set forth in 30, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

34. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 29, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

35. **(New)** The carbonization apparatus for producing activated carbon set forth in 34, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

36. **(New)** The carbonization apparatus for producing activated carbon set forth in 29, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

37. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 28, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

38. **(New)** The carbonization apparatus for producing activated carbon set forth in 37, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

39. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 28, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

40. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 27, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

41. **(New)** A carbonization apparatus for producing activated carbon by subjecting an organic waste material to be treated such as raw garbage, wood debris, meat-and-bone meal, waste clothes and plastic wastage to carbonization treatment including heating, drying, dry distillation and activation processes using steam, which apparatus comprises:

a carbonization accelerating furnace for accelerating carbonization of waste material to be treated by heat transmission caused by bringing said waste material into direct contact with the overheated steam introduced therein and discharging spent steam which is no longer required,

a carbonization furnace for carbonizing the waste material by heat transmission caused by bringing said waste material into direct contact with the overheated steam introduced therein and discharging the spent steam,

a drying furnace for drying the waste material by heat transmission caused by bringing said waste material into direct contact with the overheated steam introduced therein and discharging the spent steam,

a high-temperature steam generator for generating, from the steam introduced therein, the overheated steam to be fed to said carbonization furnace,

a deodorizing furnace for deodorizing impurities contained in the spent steam discharged from said drying furnace by heating the steam and discharging the steam reaching a high temperature, and

a waste heat boiler for generating steam from water heated with the high-temperature steam discharged from said deodorizing furnace.

42. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 41, wherein said drying furnace, carbonization furnace, drying carbonization furnace or carbonization accelerating furnace is provided with a cylinder shell having a waste intake port for introducing waste material to be treated, a cylinder part for stirring and moving the waste material, an exhaust port for discharging the waste material, and a steam inlet port for introducing overheated steam or spent steam tangentially from the outside of said cylinder part to the inside of said cylinder part, and rotatable stirring blades for stirring and moving the waste material in said cylinder shell.

43. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 42, wherein said steam inlet port is formed to introduce the overheated steam or spent steam in the same direction tangent to the inner surface of said cylinder as the rotation direction of said stirring blades.

44. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 43, wherein said cylinder shell is provided with a plurality of steam inlet ports.



45. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 44, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

46. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 45, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

47. The carbonization apparatus for producing activated carbon set forth in claim 44, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

48. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 43, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

49. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 48, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

50. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 43, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

51. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 42, wherein said cylinder shell is provided with a steam discharge port from which the spent steam after heating the waste material in said cylinder shell is discharged in the direction tangent to the inner surface of said cylinder part from the inside of said cylinder part to the outside of said cylinder part.

52. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 51, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

53. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 42, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).

54. **(New)** The carbonization apparatus for producing activated carbon set forth in claim 41, further comprising a pressure regulation means or restriction means for adjusting the overheated steam or spent steam to be fed to said drying carbonization furnace or carbonization accelerating furnace to 5 to 20(m/s).